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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/071,472

02/08/2002

Attilio Rimoldi

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9971

8791

7590

02/14/2006

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EXAMINER

JONES, HUGH M

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,472

Applicant(s)

RIMOLDI ET AL.

Examiner

Hugh Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 183). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/23/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-30 of U. S. Application 10/071,472, filed 02/08/2002, are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Gadh et al. (of record - Applicant's IDS).

4. Terms in the claims are interpreted in view of their definitions in the specification. See, for example, the definitions for functional modeling and behavioral parameters on pp. 9-10.

5. Gadh et al. disclose :

creating a digital model of an object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text), the method comprising:

receiving one or more behavioral parameters associated with each design

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feature of the object from a user (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

determining a correspondence between each design feature and one or more body partitions within a predefined set of body partitions composing a body of the object using the behavioral parameters (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

assigning a contributing volume to each of the one or more body partitions (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text); and

computing the digital model of the object using contributing volumes of each design feature of the object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

wherein each of the predefined set of body partitions is a node of a Boolean tree (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

computing the contributing volume based on a profile of a corresponding design feature (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

creating a link between a body partition having a contributing volume and a corresponding design feature of the object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

wherein the design feature is characterized by one or more geometrical parameters and one or more behavioral parameters (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

creating links between related design features of the object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

wherein the digital model is computed using a predefined algorithm (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

wherein the predefined algorithm remains unchanged for any product (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

storing data pertaining to the digital model in a database (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

wherein the data pertaining to the digital model includes the predefined set of body partitions with corresponding contributing volumes and links to corresponding design features of the object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

re-computing the digital model of the object using the data stored in a database upon receiving a user request (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

receiving a user request to modify the object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

reassign contributing volumes to body partitions according to the requested

modification (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text); and

re-computing the digital model of the object using the reassigned contributing volumes (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text);

wherein the requested modification requires a change of one or more parameters of an existing design feature of the object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

wherein the requested modification requires an addition of a new design feature to the object (fig. 3 (shape modeling graph), fig. 23 & 28 (body partitions, links, correspondence, parameters, design features, contributing volume, user interaction), fig. 45 (virtual modeler), fig. 30-32 (links) - and corresponding text).

6. Any inquiry concerning this communication or earlier communications from the examiner should be:

directed to: Dr. Hugh Jones telephone number (571) 272-3781,

Monday-Thursday 0830 to 0700 ET,

or

the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or (703) 308-1396 (for informal or draft communications, please label *PROPOSED* or *DRAFT*).

Dr. Hugh Jones

Primary Patent Examiner

~~October 13, 2005~~

January 31, 2006

HJ

HUGH JONES Ph.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100